

REMARKS/ARGUMENTS

The Examiner requests that formal drawings be submitted as the drawings submitted with the application are deemed to be informal. Formal drawings were forwarded to the Patent and Trademark Office (PTO) on June 19, 2000 approximately three months after this application was filed. Submitted herewith are copies of the transmittal letter and the returned postcard forwarded to the PTO with the formal drawings. Apparently the formal drawings for this application have been misplaced. Thus, submitted herewith is another set of formal drawings for this application.

The Examiner objects to the wording of claims 1 and 2 which have been respectively amended to recited “a desktop computer” in the preamble of claim 1 and “said user” in the amended portion of claim 1 (previously recited in canceled claim 2). These corrections address the antecedency issues raised by the Examiner.

The Examiner further objects to the wording of claim 1 in its recitation of “only identifying addresses of users authorized for WRITE access...,” as being provided access to the software application stored in the file. As described in the specification on page 3, lines 6-13, the IP address of each subsequent viewer is compared to the contents of a file provided by the session owner to determine if the viewer is to be accorded “passive” or “active” status. In the claims, as in the specification, the terms “user” and “viewer” are assigned the same meaning and are used interchangeably (see page 6, lines 10 and 11). If the viewer’s IP address is stored in the file, the viewer is accorded active status and is allowed to initiate activity in the desktop such as making

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changes to software applications in the desktop. If the viewer's IP address is not present in the file, the viewer is accorded only passive status, limiting the viewer's participation to merely observing the actions of other active viewers including the actions of the session owner. Thus, the recitation in canceled claim 2 (which is now resited in amended claim 1) of "wherein only identifying addresses of users authorized for WRITE access to the software application are stored in said file" is correct and accurately describes the present invention.

Claims 1-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,571,245 to Huang et al.

The writing, editing and revising of software programs is frequently a multi-worker task involving the unique expertise of various programmers. For example, one participant may bring to the software writing session hardware simulation expertise, while another participant may contribute software expertise in writing or debugging a software application. The use of virtual network computing (VNC) is particularly useful in updating computer software documentation created by multiple authors. Each author, while at his or her own work station, can update the same documents, while reviewing the updates of other contributing authors. By allowing the various contributing authors to share a common desktop computer, the authors may be remotely located, thus resulting in the avoidance of travel and the saving of time and money. The present invention is thus directed to the writing, editing and revising of software applications by plural remotely located users, or viewers, using a shared, common desktop computer. While the Huang reference involves a virtual desktop in a computer network, it does not discuss, suggest or even contemplate the situation addressed and resolved by Applicants' invention.

Applicants' invention is directed to a method for use in a VNC arrangement which allows multiple users, or viewers, to simultaneously share a desktop computer with the extent of access of each viewer determined by the server, or session, owner who is defined as the first user of the VNC session. The Internet Protocol (IP) address of each subsequent viewer is compared to the contents of a file provided by the session owner to determine if the viewer is to be accorded "passive" or "active" status. If the viewer's IP address is stored in the file, the viewer is accorded active status and is allowed to initiate activity in the desktop such as making changes to software applications in the desktop. If the viewer's IP address is not present in the file, the viewer is accorded only passive status, limiting the viewer's participation to merely observing the actions of other, active viewers including the actions of the session owner. This invention allows the session owner to create and maintain realtime active control of the desktop's server on a per viewer and per session basis. Information such as the IP address, logical machine name of a VNC viewer which connects to the desktop, and connected viewer status (active/passive) is provided on a video display for viewing by the session owner. The session owner can also view other information such as when a viewer disconnects from the desktop and the number of viewers connected to the desktop from a given IP address. The session owner can use the video display to change the status of any connected viewer, and further provide auditing and VNC log file monitoring of the desktop server for errors and insensitivities and notifies the session owner when problems are detected. An audio "beep" is also provided to notify the session owner whenever a viewer connects to or disconnects from the VNC session.

The patent to Huang is directed to a virtual desktop in a computer network for use by a user who has access to multiple computer systems. Huang contemplates an arrangement where a user has access to various computer systems which are usually not maintained to be replicas of each other and have different customization. As such, the systems are typically installed with different applications and include different files that are organized in different arrangements. The purpose of Huang is to provide a virtual computing environment such that the user sees the same desktop with which the user is accustomed, has access to the same applications and files, and enjoys the same amenities regardless of the computer system on which the user gains access. See column 1, lines 23-39. The purpose of Huang is not to simultaneously provide multiple users with access to a common software application in a server of a desktop computer for allowing the plural users to access or exercise control over the software application, where the control is selectively granted by the session owner to the various users. This is the essence of Applicants' invention and is neither disclosed nor even suggested in Huang.

In Huang, a site server 230 as shown in FIG. 2 processes a user's login, which typically includes receiving the user's identification and password. The site server is coupled to, and provides the login information to, a controller server 240 which checks the login information against a database 242 of login information to determine whether the user is authorized for access to the network. If the user is authorized, the controller server 240 determines the appropriate Hypertext Transport Protocol (HTTP) server to which the user should be directed. See column 4, lines 31-46. Huang neither discloses nor even suggests that the level of access provided to a user is determined by the session owner, or the user, who first accesses the application. This is a unique

feature of Applicants' invention and is recited in all of the pending claims. Because of the specific use for which Applicants' invention is intended, i.e., allowing plural remotely located users to exercise control over or simply monitor a software application in its design and development stage, this feature of allowing the session owner to dictate not only the access, but also the level of access, to the software application is uniquely adapted for use in the claimed environment. Huang does not disclose an environment wherein multiple users are allowed to exercise control over a software application under the supervision of a session owner who not only controls those who have access to the software application, but also the level of access for each virtual network computing session. This type of coordination and control over the level of access provided to a software application to multiple users is neither disclosed nor even suggested in Huang which contemplates only one level of access provided to all individual users.

In addition, because the virtual network computing session contemplated for use with the present invention involves providing either full or limited access to the software application for various requesting viewers, it is fundamentally different in its approach from Huang's virtual desktop in a computer network. As shown in Huang's FIG. 7, a file window 714 can include a listing 716 of information on the selected file including the file version, the file type, the size of the file and who created it and when, who last modified it and when, and who has access rights to the file and whether a payment must be made to use the file. See column 10, lines 45-53. More specifically, the site server 230 is in the form of a Uniform Resource Locator (URL) site which processes a user's login, which typically includes receiving the user's identification and password. As shown in FIG. 2, the controller server 240 checks the login information against the database

242 of login information to determine whether the user is authorized for access to the network. If the user is authorized, controller server 240 determines the appropriate Hypertext Transport Protocol (HTTP) server to which the user should be directed. Thus, user access is predetermined in Huang and is stored in a site server for subsequent access by a user. The user's access is not determined in Huang, as in the present application, by a person who creates the virtual network computing session, or the session owner. The unique arrangement of the present invention, wherein each user's access and level of permitted access is determined by the creator of the virtual network computing session is uniquely adapted for use in granting access to a software application wherein some users are permitted to modify the software application, while other users are only permitted to view changes to the software application implemented by other users. These unique features of Applicants' invention are now recited in amended independent claim 1 as well as in independent claim 12.

In summary, the claimed invention is directed to a method for simultaneously allowing plural remotely located viewers, under the control of a first viewer designated as the session owner who assigns either WRITE or READ access to a software application to each individual viewer, to selectively access the software application at a predetermined level in a virtual network computing session. WRITE access allows a viewer to exercise control over the software application, i.e., modify it, while READ access allows a viewer to only review desktop activity initiated by other viewers. The session owner can dynamically specify, on a per viewer basis as well as on a per session basis, the level of access, passive or active, of each subsequent viewer. The Huang virtual desktop in a virtual computer network, on the other hand, allows a user to access the virtual

desktop from a variety of systems through various communications links and to customize the virtual desktop so that the user sees the same desktop and has access to the same applications, files, and amenities independent of the particular computer system on which the access is gained. This allows the user to enjoy a 'virtual' desktop work environment regardless of the computer through which access to the Internet is gained and to provide the user with global access to the Internet from the home, office, while on travel, etc. The object of the claimed invention is thus to provide controlled access in realtime for plural remotely located users to a software application for allowing the exercise of control over or mere viewing of the software application, while the object of Huang is to allow a user to access the same files and resources via the Internet from any one of plural computers, or platforms, from virtually any location with Internet access with equal ease, or facility. These basically different objectives are achieved by fundamentally different implementations in the two approaches as pointed out above.

The lack of any evidence relied upon by the Examiner to prove that a person of ordinary skill in the art would have known at the relevant time to make use of a virtual network computing arrangement for allowing multiple users, or viewers, to share a common desktop computer for the purpose of allowing users to either write or edit a software application by allowing a first user, or session owner, to either grant or deny access and to also define the level of access of each subsequent user, precludes a finding of a *prima facie* case of obviousness necessary to warrant the Examiner's rejection of all of the pending claims. Merely because of prior art knowledge and use of virtual network computing to allow a user to manipulate and manage plural files and facilities so that for each file and facility the user sees the same desktop with which the user is accustomed,

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there is no basis in this case to conclude that all possible virtual network computing sessions were thus necessarily within the scope of one of ordinary skill in the art at the time of Applicants' invention. Ex parte Kumagai, 9 USPQ 2d 1642, 1649 (Bd App 1988). The specific application of a virtual network computing session to the problem which the present invention is intended to resolve, as disclosed and claimed, is a fundamental departure from and substantial improvement over the prior art.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or references when combined, must teach or suggest all the claimed limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and must not be based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Moreover, the initial burden is on the Examiner to provide some suggestion in the prior art of the desirability of doing what the inventor has done. In the present rejection, the Examiner has merely located a single reference which allegedly discloses Applicants' invention. The Examiner has failed to provide any support that the cited reference expressly or impliedly suggests the claimed invention. Nor has the Examiner presented a convincing line of reasoning as to why one skilled in the art would have found the claimed invention to have been obvious in light of the teachings of the cited reference. Indeed, in the present case the fundamentally different performance objectives between Huang and Applicants'

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invention point to the lack of support for this position. The Examiner is required to set forth a convincing line of reasoning leading to the obvious combination of the cited references. *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). The Examiner has neither provided the suggestion or motivation in the cited reference which would suggest to one skilled in the art the object, or purpose, as well as the implementation of the claimed invention, nor has the Examiner presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the cited reference.

With this amendment, all of the pending claims are believed to define patentable subject matter. Therefore, reconsideration and allowance of the pending claims is respectfully solicited.

Respectfully submitted,

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